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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/752,533	12/29/2000	Stephen M. Coutts	252312005704	1380
25226	7590	11/28/2005	EXAMINER	
MORRISON & FOERSTER LLP 755 PAGE MILL RD PALO ALTO, CA 94304-1018			LUKTON, DAVID	
ART UNIT		PAPER NUMBER		
				1654

DATE MAILED: 11/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/752,533	COUTTS ET AL.
Examiner	Art Unit	
David Lukton	1654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

## **Disposition of Claims**

4)  Claim(s) See Continuation Sheet is/are pending in the application.  
4a) Of the above claim(s) 129 is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) See Continuation Sheet is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_ .

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/9/05 has been entered.

♦

Pursuant to the directives of the response filed 9/9/05, claim 112 has been cancelled, claims 22, 64, 106 have been amended, and claims 135-156 have been added. Claims 22, 23, 26, 32, 35, 36, 38, 43, 45, 46, 51-54, 64-77, 79-82, 84, 86, 89, 99-111, 113-156 are now pending.

Claims 22, 23, 26, 32, 35, 36, 38, 43, 45, 46, 51-54, 64-77, 79-82, 84, 86, 89, 99-111, 113-128, 130-156 are examined in this Office action. Claim 129 is withdrawn from consideration.

Applicants' arguments filed 9/9/05 have been considered and found not persuasive.

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As before, the abbreviation "VPM" is used hereinbelow to denote a "valency platform molecule".

The abbreviation "BAM" is used hereinbelow to denote a "biologically active molecule".

The abbreviation "PEG" is used hereinbelow to denote polyethylene glycol.

\*

Claims 22, 64 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. USP 5,276,013.

This ground of rejection has been imposed previously. In response, applicants have argued that *In re Kaplan* (229 USPQ 678, 1986) confers "immunity" from ODP rejections in cases where the claims under rejection are substantially narrower than the claims (of the patent or application) over which they are being rejected. The basic foundation of applicants' argument is that examiners are barred from using the disclosure of a patent as "prior art". Applicants have stated the following:

"*In re Kaplan* concerned an issued patent and a subsequent application, where the issued patent contained broad claims and the subsequent application under examination claimed a narrower version thereof. The subject matter claimed in the application under rejection was disclosed and was within the scope of the broad claims of the patent, but was not specifically claimed in the issued patent".

In particular, note the following assertion by applicant:

"[the] issued patent contained broad claims and the subsequent application under examination claimed a narrower version thereof".

This particular assertion, however, is not necessarily true. Much depends on what is meant by a "narrower version". Claim 1 of USP '588 is drawn, in essence, to a process of making alkane polyols by hydrogenating carbon oxides. Claim 1 of USP '551 is drawn to a Jepson claim, the essence of which is the following:

In a process of making an alkane polyol by hydrogenating carbon oxides, the improvement comprising limiting the solvent to tetraglyme and sulfolane such that: (a) the solvent mixture is inert, and (b) the rate of formation of the polyol is greater than would have been obtained had tetraglyme been used in the absence of sulfolane, or *vice versa*.

The first point to be made is that it is not necessarily the case that the later claim (USP '551) is "narrower" than the earlier claim USP '588. One is a method of making something, and the other is a way of improving a method. Thus, according to one reasonable interpretation, the Jepson claim is not a "narrower version" of the earlier method claim. And whether or not the later Jepson claim is a "narrower version" of the earlier method claim, the fact is that the later Jepson claim is actually not subgeneric to the earlier method claim, a fact which sufficiently distinguishes Kaplan from the instant case, even without further argument on the examiner's part. In any case, the primary question is not that of which side of the semantic argument one wants to be on (with regard to the question of "narrowness"), but rather, how should the Kaplan decision apply when the two genera in question are drawn to compounds? Moving on to the next issue, as indicated above, the later claim (USP '551) required that "the improvement" be such that both of the following conditions be met: (a) the solvent mixture is inert, and (b) the rate of formation of the polyol is greater than would have been obtained had tetraglyme been used in the absence of sulfolane, or *vice versa*. It does not appear that the earlier patent (USP '588) recited that these conditions would be met if the tetraglyme /sulfolane mixture were to be used. Applicants have made no attempt to explain where in the

text of the earlier patent (USP '588) these conditions are recited. If indeed these conditions/objectives are not recited, then the applicability of Kaplan to claims that are drawn to compounds becomes questionable at best.

Unlike in the *Kaplan* case, where the later claim was not subgeneric to the earlier claim, in the instant case, the later claim is subgeneric to the earlier claim. And in the instant case, the examiner is not using the disclosure (of the issued patents) as "prior art"; rather, the examiner is using the disclosure of the issued patents to determine what is encompassed. The argument could stop here and be sufficient. But there is another point to be made. The *Kaplan* case predates *In re Baird* (29 USPQ2d 1550, 1994). *In re Baird*, of course, pertained to a §103 issue, rather than double patenting. The examiner acknowledges that in imposing a §103 rejection, the examiner need not consider what is present in the claims of the patent over which the rejection is made. But at the same time, the court in *Baird* argued essentially that an examiner has not only the right but the obligation to consider species and subgenera that might be disclosed in the application (not necessarily limited to the claims) to determine if there is in fact a reason or motivation to select at least one embodiment within the claims at issue. Under this principle then, it is appropriate for the examiner to consider species and subgenera that are disclosed in the description of the patent. Thus, for each of three separate reasons, the rejection is maintained.

Claims 22, 64 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. USP 6,060,056. Although the conflicting claims are not identical, they are not patentably distinct from each other. Claim 64 is drawn to a (composition comprising a ) conjugate of a VPM and a BAM. Claim 1 of U.S.P. 6060056 is drawn to a conjugate of a VPM and a BAM, wherein the BAM must be an analog molecule of an immunogen. Although the scope of the compounds encompassed by BAM is more limited in the '056 patent than is the case here, there is still overlap between the respective genera.

◆

Claims 22, 64 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 9 of U.S. Patent No. USP 5,552,391. Although the conflicting claims are not identical, they are not patentably distinct from each other.

As indicated previously, claim 64 is drawn to a (composition comprising a ) conjugate of a VPM and a BAM, wherein the VPM is branched and can contain PEG. For example, the conjugates depicted in figure 6a of the patent fall within the scope of claim 64.

◆

Claims 22, 64 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 22 and 32 of U.S.

Serial No. 09/753350. Although the conflicting claims are not identical, they are not patentably distinct from each other. [This is a *provisional* obviousness-type double patenting rejection because the conflicting claims have not in fact been patented].

Claim 22 of 09/753350 is drawn to a conjugate of a VPM and a BAM. The claim specifies that the VPM must be branched. Claim 32 of S.N. 09/753350 contains all of the limitations of claim 22 (of S.N. 09/753,350), and further requires that the VPM comprises PEG.

Perhaps if claim 22 of S.N. 09/753350 were read in a vacuum, one could not be certain that the claim encompassed the invention that is defined by (instant) claim 64. But it is entirely appropriate to consider the contents of the description (of the invention) in endeavoring to assess that which may be encompassed. The disclosure of application S.N. 09/753350 is identical to that of application S.N. 09/752533. All VPM's that are disclosed in 09/753350 are also disclosed in 09/752533 and *vice versa*. All BPM's that are disclosed in 09/752533 are also disclosed in 09/753350 and *vice versa*. Claim 22 of 09/753350 does not mention the group -OCH<sub>2</sub>-CH<sub>2</sub>O-, but it is clear, just from a reading of claim 32 (even without the disclosure) that VPM's comprising PEG are encompassed. The two genera do not coincide exactly, but there is clearly substantial overlap of the claimed subject matter.

The claims are rendered obvious.



Claims 22, 64, 78 and 80 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 46 of U.S. Serial No. 09/590,592; claim 68 is provisionally rejected as unpatentable over claim 54 of the '592 application. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Claim 46 of 09/590592 is drawn to a conjugate of a VPM and a BAM, wherein the VPM is specified to be that recited in claim 38 of 09/590592. The VPM recited in claim 38 of 09/590592 is not recited in 09/752,533; "two-way" obviousness is not being asserted by the examiner. However, the conjugates of 09/590592 have all of the structural features required by claim 64 of the instant application. Claim 54 of the '592 application recites that the "BAM" can be a polynucleotide, and so claim 68 of the instant application is rendered obvious thereby. [This is a *provisional* obviousness-type double patenting rejection because the conflicting claims have not in fact been patented].

The obviousness-type double patenting rejection is a judicially established doctrine based upon public policy and is primarily intended to prevent prolongation of the patent term by prohibiting claims in a second patent not patentably distinct from claims in a first patent. *In re Vogel*, 164 USPQ 619 (CCPA 1970). A timely filed terminal disclaimer in compliance with 37 CFR 1.321(b) would overcome an actual or provisional rejection on this ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.78(d)

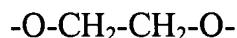


The following is a quotation of the first paragraph of 35 U.S.C. §112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 22, 23, 26, 32, 35, 36, 38, 43, 45, 46, 51-54, 64-77, 79-82, 84, 86, 89, 99-111, 113-128, 130-156 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Descriptive support is lacking for the claimed invention. Consider first the requirement that the VPM must comprise the following functional group:



Nowhere in the specification is there any suggestion that the VPM can comprise the functional group in question. Certainly, there are several references in the specification to PEG. However, the fact that a polymer of ethylene glycol is described does not constitute a basis for asserting that a monomer of ethylene glycol is described.

Perhaps it is true that claim 64 corresponds to a small subgenus of formula 6 or 7, but there is no reason given in the specification for selecting out the narrow subgenus of claim 64, with its recitation of ethylene glycol monomers and trimers.

Another issue concerns the following phrase in claim 22:

“the valency of said VPM is provided by four or more attachment sites located at termini of the VPM”

It is noted that, within the specification, there are a few examples of specific compounds that happen to meet the requirements of this phrase. However, neither one specie nor 20 species constitutes a description of a genus. It is also noted that the term "terminus" or "termini" occurs nine times in the specification. However, in none of these cases is the term used in reference to a genus, and certainly in no case is used in reference to a genus in which there are four attachment sites located at such termini.

In response, applicants have pointed to each of the elements of claim 64 and have argued that if one looks at any one of these elements in isolation, one can find descriptive support for it. Even if this is true, the principle issue is that of "picking and choosing" limitations from a myriad of possibilities. This process of "picking and choosing", as well as any subgenus resulting from this process, constitutes new matter.

♦

Claims 38, 127 and 145 are rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicants have shown (pp 102-103) that conjugate 3-II is effective to reduce the number of anti-PN plaque-forming cells in mice. Also shown (p. 107 and figure 4) is suppression of anti-PN response by conjugate 20-II, and that (page 108) conjugate 20-II suppresses production of PN-specific antibody producing cells.

The cited claims assert that SLE can be successfully treated. While it may be true that production of IgG can be suppressed in some cases, this is hardly tantamount to suppression of all components of the immune system. Merely because one can suppress formation of IgG does not mean that there exists even one autoimmune disease which can be successfully treated. If, for example, a person who is afflicted with SLE (lupus) is producing antibodies at the rate of 100 "units" per day in the absence of the conjugate, and 90 units per day in the presence of the conjugate, one could say the antibody production had been suppressed. But this does not mean that the illness will not worsen. Moreover, adverse immune reactions are not limited to the consequences of excess antibody production alone. As stated in *Ex parte Forman* (230 USPQ 546, 1986) and *In re Wands* (8 USPQ2d 1400, Fed. Cir., 1988) the factors to consider in evaluating the need (or absence of need) for "undue experimentation" are the following: quantity of experimentation necessary, amount of direction or guidance presented, presence or absence of working examples, nature of the invention, state of the prior art, relative skill of those in that art, predictability or unpredictability of the art, and breadth of the claims.

The reality is that many agents are known which suppress one or more functions of the immune system, yet which are not effective to treat autoimmune disease. One cannot "predict" therapeutic efficacy in the treatment of SLE based on the suppression of IgG

formation. "Undue experimentation" would be required to practice the claimed invention.

\*

Claims 22, 23, 26, 32, 35, 36, 38, 43, 45, 46, 51-54, 64-77, 79-82, 84, 86, 89, 99-111, 113-128, 130-156 are rejected under 35 U.S.C. §112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 22 recites, for the case of "r" being zero, that a conjugate can be formed by conjugation of "a -O-CH<sub>2</sub>-CH<sub>2</sub>-O- containing VPM that comprises -CH<sub>2</sub>-CH<sub>2</sub>-".

Perhaps one can argue that -O-CH<sub>2</sub>-CH<sub>2</sub>-O- "comprises" -CH<sub>2</sub>-CH<sub>2</sub>-, but the claim is nevertheless ambiguous when "r" is zero.

- Each of claims 36, 51, 53, 146 recite the phrase "suitable for reducing antibody levels". Does this refer to antibody levels in a test tube or Petri dish, or is something else intended?
- In claim 135, the term "biologically active molecules" does not have antecedent basis in all of the claims referred to.
- In claims 149-150, the term "biologically active molecules" lacks antecedent basis.
- Claim 79 recites that the composition is suitable for injection. Would this be injection into an HPLC, injection into a mass spectrometer, injection (through a septum) into a vial, or does it mean something else?

\*

The following is a quotation of 35 USC §103 which forms the basis for all obviousness rejections set forth in the Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made, absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103.

Claims 22, 54 are rejected under 35 U.S.C. §103 as being unpatentable over Desai (USP 5,648,506).

Desai discloses branched molecules containing PEG and taxol.

Thus, the claims are rendered obvious.

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Claims 22, 54 are rejected under 35 U.S.C. §103 as being unpatentable over Merrill (USP 5,171,264).

Merrill discloses branched molecules containing polyethylene glycol (PEG). Polyethylene glycol that consists of "n" hydroxyethylene units can be viewed as a conjugate of

$(O-CH_2CH_2)_{n-1}$  and ethanol.

Thus, the claims are rendered obvious.

\*

Reference 9 was stricken from the IDS because of the absence of a translation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lukton whose telephone number is 571-272-0952. The examiner can normally be reached Monday-Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell, can be reached at (571)272-0974. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.



DAVID LUKTON  
PATENT EXAMINER  
GROUP 1800

Continuation of Disposition of Claims:

Claims pending in the application are 22,23,26,32,35,36,38,43,45,46,51-54,64-77,79-82,84,86,89,99-111 and 113-156.

Continuation of Disposition of Claims: Claims rejected are 22,23,26,32,35,36,38,43,45,46,51-54,64-77,79-82,84,86,89,99-111,113-128 and 130-156.